

Sub A2

5

WHAT IS CLAIMED IS:

1. A graft attachment assembly comprising:
a body including a base portion having a top surface and a branch
portion having a passageway therethrough projecting outwardly from the top surface of the
base portion; and

a clamp member having an opening configured to receive the branch
portion, the clamp member being movable about the branch portion, wherein the bottom
surface of the clamp member may be positioned adjacent to the top surface of the graft
member to clamp tissue therebetween.

10

2. A graft attachment assembly according to claim 1, wherein the top
surface of the base member is convex and the bottom surface of the clamp member is
concave.

15

3. A graft attachment assembly according to claim 2, further including
a sealing assembly between the top and bottom surfaces.

20

4. A graft attachment assembly according to claim 3, wherein the
sealing assembly includes a rib formed on one of the top and bottom surfaces and a channel
formed in the other of the top and bottom surfaces, the rib being aligned with the channel in
a clamped position.

25

5. A graft attachment assembly according to claim 1, further
comprising a locking ring dimensioned to be received about the branch portion to retain
tissue thereabout.

30

6. A graft attachment assembly according to claim 5, wherein the
branch portion includes at least one annular ramped surface positioned thereabout and the
locking ring is flexible, the ramped surface being dimensioned to retain the locking ring in
position about the branch portion.

5 7. A graft attachment assembly according to claim 1, wherein the clamp member includes at least one retaining member positioned about the opening and, the branch portion includes at least one tooth which is aligned with the at least one retaining member in a clamped position, wherein the retaining member is movable into engagement with the at least one tooth to retain the clamp member in the clamped position.

10 8. A graft attachment assembly according to claim 7, wherein the at least one tooth includes a plurality of teeth, the retaining member being selectively movable into engagement with any one of the teeth to accommodate tissues of different thicknesses.

15 9. A graft attachment assembly comprising:
Sub A3
a graft member including a base portion having a top surface and a branch portion having a passageway therethrough, the branch portion projecting outwardly from the base portion;

20 a clamp member having a bottom surface configured to sealingly engage the top surface of the base portion and an opening dimensioned to slidably receive the branch portion, the clamp member being movable about the branch portion to a position adjacent to the base portion to clamp tissue therebetween; and

25 a locking member slidable about the branch portion, the locking member being dimensioned to secure a vessel about the branch portion.

30 10. A graft attachment assembly according to claim 9, wherein the top surface of the base member is convex and the bottom surface of the clamp member is concave.

25 Sub J5
11. A graft attachment assembly according to claim 10, further including a sealing assembly between the top and bottom surfaces.

10
12. A graft attachment assembly according to claim 11, wherein the sealing assembly includes a rib formed on one of the top and bottom surfaces and a channel formed in the other of the top and bottom surfaces, the rib being aligned with the channel in the clamped position.

5
11
13. A graft attachment assembly according to claim 12, wherein the branch portion includes at least one annular ramped surface positioned thereabout, the ramped surface being dimensioned to retain the locking ring in position about the branch portion.

10
14. A graft attachment assembly according to claim 13, wherein the clamp member includes at least one retaining member positioned about the opening and, the branch portion includes at least one tooth which is aligned with the at least one retaining member in the clamped position, wherein the retaining member is movable into engagement with the at least one tooth to retain the clamp member in the clamped position.

15
13
15. A graft attachment assembly according to claim 14, wherein the at least one tooth includes a plurality of teeth, the retaining member being selectively movable into engagement with any one of the teeth to accommodate tissues of different thicknesses.

20
14
16. A graft attachment assembly according to claim 9, wherein the graft assembly is constructed from a biologically compatible material.

25
15
17. A graft attachment assembly according to claim 16, wherein the biologically compatible material is polytetrafluoroethylene.

30
18. A graft attachment assembly comprising:
a base insertable into a vessel lumen, the base including at least one branch extending therefrom to receive a graft and a locking member positionable about the graft and mountable with respect to the branch to retain the graft on the branch.

5
Sub 3
10
15
20
25
30
19. A graft attachment assembly according to claim 18, wherein the locking member is a locking ring which presses the graft against the branch.

20. A graft attachment assembly according to claim 19, wherein the locking ring is slidable with respect to the branch.

21. A method of attaching a first and second vessel portions comprising the steps of:

(a) placing a base portion of a graft attachment assembly within a lumen of the first vessel portion, the graft attachment assembly including a branch portion projecting from the base portion, the branch portion being positioned to extend from the vessel;

(b) positioning a second vessel portion about a first end of the branch portion; and

(c) frictionally securing the second vessel portion about the branch portion.

22. A method according to claim 21 further comprising the step of clamping the base portion of the graft attachment assembly to the first vessel portion.

23. A method according to claim 21 further comprising the step of locking the base portion of the graft attachment assembly in the clamped position with respect to the first vessel portion.

24. A method according to claim 21, wherein the second vessel portion is a synthetic graft.

25. A method according to claim 21, wherein the first and second vessel portions are portions of discrete vessels.